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PATENT APPLICATION

ATTORNEY DOCKET NO. 200302158-1

IN THE
UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor(s): Robert E. VAN CLEVE et al.

Confirmation No.: 4192

Application No.: 09/966,064

Examiner: Thuan N. Du

Filing Date: 09/28/2001

Group Art Unit: 2116

Title: RESERVED ROM SPACE FOR STORAGE OF OPERATING SYSTEM DRIVERS

Mail Stop Appeal Brief-Patents
Commissioner For Patents
PO Box 1450
Alexandria, VA 22313-1450

TRANSMITTAL OF APPEAL BRIEF

Sir:

Transmitted herewith is the Appeal Brief in this application with respect to the Notice of Appeal filed on 08/16/2005.

The fee for filing this Appeal Brief is (37 CFR 1.17(c)) \$500.00.

(complete (a) or (b) as applicable)

The proceedings herein are for a patent application and the provisions of 37 CFR 1.136(a) apply.

() (a) Applicant petitions for an extension of time under 37 CFR 1.136 (fees: 37 CFR 1.17(a)-(d) for the total number of months checked below:

() one month \$120.00
() two months \$450.00
() three months \$1020.00
() four months \$1590.00

() The extension fee has already been filled in this application.

(X) (b) Applicant believes that no extension of time is required. However, this conditional petition is being made to provide for the possibility that applicant has inadvertently overlooked the need for a petition and fee for extension of time.

Please charge to Deposit Account 08-2025 the sum of \$500.00. At any time during the pendency of this application, please charge any fees required or credit any over payment to Deposit Account 08-2025 pursuant to 37 CFR 1.21. Additionally please charge any fees to Deposit Account 08-2025 under 37 CFR 1.16 through 1.21 inclusive, and any other sections in Title 37 of the Code of Federal Regulations that may regulate fees. A duplicate copy of this sheet is enclosed.

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Respectfully submitted,

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appellants:	Robert E. Van Cleve et al.	§	Confirmation No.:	4192
		§		
Serial No.:	09/966,064	§	Group Art Unit:	2116
		§		
Filed:	09/28/2001	§	Examiner:	Thuan N. Du
		§		
For:	Reserved ROM Space	§	Docket No.:	200302158-1
	For Storage Of Operating	§		
	System Drivers	§		

APPEAL BRIEF

Mail Stop Appeal Brief – Patents
Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

Date: October 7, 2005

Sir:

Appellants hereby submit this Appeal Brief in connection with the above-identified application. A Notice of Appeal was filed via facsimile on August 16, 2005.

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I. REAL PARTY IN INTEREST

The real party in interest is the Hewlett-Packard Development Company (HPDC), a Texas Limited Partnership, having its principal place of business in Houston, Texas. HPDC is a wholly owned affiliate of Hewlett-Packard Company (HPC). HPC merged with Compaq Computer Corporation (CCC) which owned Compaq Information Technologies Group, L.P. (CITG). The Assignment from the inventors to CITG was recorded on September 28, 2001, at Reel/Frame 012221/0803. The Change of Name document was recorded on May 12, 2004, at Reel/Frame 014628/0103.

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II. RELATED APPEALS AND INTERFERENCES

Appellants are unaware of any related appeals or interferences.

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III. STATUS OF THE CLAIMS

Originally filed claims: 1-22.
Claim cancellations: 1.
Added claims: None.
Presently pending claims: 2-22.
Presently appealed claims: 6-12 and 16-22.
Presently allowed claims: 2-5 and 13-15.

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IV. STATUS OF THE AMENDMENTS

No claims were amended after the final Office action dated May 17, 2005.

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V. SUMMARY OF THE CLAIMED SUBJECT MATTER

The various embodiments of the invention are directed to reserved ROM space for storage of operating system drivers.¹ At least some of the illustrative embodiments are a computer system comprising a CPU,² a main memory array coupled to the CPU,³ and a read only memory (ROM) coupled to the CPU.⁴ The ROM further comprises a redundant portion,⁵ and a non-redundant portion.⁶ The redundant portion of the ROM stores a first set of BIOS programs and a second set of BIOS programs,⁷ the non-redundant portion of the ROM stores a first set of operating system drivers.⁸ At least one operating system driver of the first set of operating system drivers is read from the ROM during installation of an operating system for the computer system.⁹

Other illustrative embodiments are a method comprising storing in a ROM device of a computer system a basic input output system(BIOS) program,¹⁰ and storing in the ROM hardware drivers for a plurality of different operating systems.¹¹

Other illustrative embodiments are a method comprising storing in a ROM device of a computer system a basic input output system(BIOS) program,¹² storing in the ROM hardware drivers for a plurality of different operating

¹ Specification Title.

² Specification Paragraph [0021], lines 1-2. Hereinafter, citations to paragraphs and line numbers take the form ([paragraph], lines x-y). Thus, in the shorthand notation this cite would be ([0021], lines 1-2).

³ ([0021], lines 3-5); Figure 1, element 12.

⁴ ([0025], lines 2-3); Figure 1, element 26.

⁵ ([0032], line 4); Figure 4, element 30.

⁶ ([0032], line 4); Figure 4, element 32.

⁷ ([0032], lines 7-11); Figure 4, element 32.

⁸ ([0032], lines 5-7); Figure 4, element 32.

⁹ ([0032], lines 11-13).

¹⁰ ([0033], lines 1-4).

¹¹ ([0036], lines 9-11).

¹² ([0033], lines 1-4).

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systems,¹³ dividing the ROM into a redundant and non-redundant portions,¹⁴ storing the BIOS program in the redundant portion of the ROM,¹⁵ storing a second BIOS program in the redundant portion of the ROM,¹⁶ and storing the hardware drivers in the non-redundant portion of the ROM.¹⁷

Yet still other illustrative embodiments are a method comprising supplying an operating system driver during the installation of an operating system by copying the operating system driver from a read only memory (ROM) device comprising a basic input output system (BIOS) and operating system drivers for a plurality of different operating systems.¹⁸

Other illustrative embodiments are a computer system comprising a microprocessor,¹⁹ a main memory array coupled to the microprocessor,²⁰ and a ROM coupled to the microprocessor.²¹ The ROM further comprises a redundant portion,²² and a non-redundant portion.²³ The redundant portion of the ROM stores a first set and a second set of BIOS programs,²⁴ and the non-redundant portion of the ROM stores operating system drivers for a plurality of different operating systems.²⁵ At least one of the operating system drivers is read from the ROM during installation of an operating system for the computer system.²⁶

¹³ ([0036], lines 9-11); Figure 6, elements 34, 36 and 38.

¹⁴ ([0032], line 4); Figure 4 elements 30 and 32.

¹⁵ ([0032], lines 7-11); Figure 4, element 30.

¹⁶ ([0032], lines 7-11); Figure 4, element 30.

¹⁷ ([0032], lines 5-7); Figure 4, element 32.

¹⁸ ([0038], lines 5-9).

¹⁹ ([0021], lines 1-2); Figure 1, elements 10.

²⁰ ([0021], lines 3-5); Figure 1, element 12.

²¹ ([0025], lines 2-3); Figure 1, element 26.

²² ([0032], line 4); Figure 4, element 30.

²³ ([0032], line 4); Figure 4, element 32.

²⁴ ([0032], lines 7-11); Figure 4, element 30.

²⁵ ([0036], lines 9-11); Figure 6, elements 34, 36 and 38.

²⁶ ([0032], lines 11-13).

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Yet still other illustrative embodiments are a method comprising dividing an electrically erasable programmable read only memory (EEPROM) into a redundant and non-redundant portion,²⁷ storing in the redundant portion of the EEPROM a first set of basic input output system (BIOS) programs and a second set of BIOS programs,²⁸ and storing in the non-redundant portion of the EEPROM operating system drivers.²⁹

²⁷ ([0032], line 4); Figure 4, elements 30 and 32.

²⁸ ([0032], lines 7-11); Figure 4, element 30.

²⁹ ([0032], lines 5-7); Figure 4, element 32.

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VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

Whether claims 6-9 and 21-22 are unpatentable over allegedly admitted prior art and Alcorn (U.S. Pat. No. 3,106,396).

Whether claims 10-12 are unpatentable over Alcorn in view of Nakagiri (U.S. Pat. No. 6,606,669).

Whether claims 16-20 are unpatentable over allegedly admitted prior art in view of Alcorn and in further in view of Nakagiri.

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VII. ARGUMENT

A. Claims 6-9 and 21-22

Claims 6-9 and 21-22 stand rejected as obvious over allegedly admitted prior art and Alcorn. Claim 6 is representative of this grouping of claims. The grouping should not be construed to mean the patentability of any of the claims may be determined in later actions (e.g., actions before a court) based on the groupings. Rather, the presumption of 35 USC § 282 shall apply to each of these claims individually.

Alcorn is directed to an electronic casino gaming system with improved play capability, authentication and security.³⁰ In particular, Alcorn addresses a problem in that gaming commissions have previously "required that all software components in an electronic gaming system be stored in unalterable memory...",³¹ and that the contents of the unalterable memory be verified whenever a machine makes a payout above a certain dollar figure.³²

[T]he restriction requiring that the casino game program be stored in unalterable ROM memory leads to a number of disadvantageous limitations. First, due to the limited capacity of the ROM storage media traditionally used to hold the program, the scope of game play available with such systems is severely limited. ...Second, the authentication check is only conducted on a limited basis (usually after a jackpot) or other significant winning game outcome, and the authentication procedure requires that game play be halted until the ROM contents have been found to be authentic.³³

To address these shortcomings, Alcorn appears to describe a system that allows for expanded program capacity for more sophisticated games,³⁴ while also allowing authentication within the casino game itself.³⁵ To accomplish this task, Alcorn appears to disclose a system where ROM of the casino game comprises

³⁰ Alcorn Title.

³¹ Alcorn Col. 1, lines 36-38.

³² Alcorn Col. 1, lines 39-44; lines 63-67.

³³ Alcorn Col. 2, lines 3-18.

³⁴ Alcorn Col. 5, lines 26-28.

³⁵ Alcorn Col. 2, lines 30-34.

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an authentication program and a loader program broken up across multiple ROM devices.

[T]he ROM unit 14 used in the FIG. 1 system **comprises two separate ROM elements: ROM 29 and ROM 30. ROM 29 must be an unalterable device... ROM 30 is preferably an unalterable device like ROM 29... ROM 29 contains the system initialization or boot code, an authentication program, a random number generator program and an initial portion of the executive/loader programs. ROM 30 contains the operating system program, the system drivers and the remainder of the executive/loader programs** as noted below.³⁶

Having the executive/loader program in two separate ROM devices appears to be an important aspect of the Alcorn system.

In order to ensure that the authentication routine cannot be bypassed by tampering with the loader program stored in ROM 30, **an initial part of the loader program is incorporated into unalterable ROM 29.** This initial portion of the loader program requires that the authentication program be called prior to the initiation of any casino game play. Since this initial portion of the loader program is located in the unalterable ROM 29, and since no casino game play can occur until the particular casino game application data set 36 is loaded into main memory 13, the authentication procedure cannot be bypassed by tampering with the software stored in ROM 30.³⁷

Thus, the two ROM device aspect of Alcorn does not appear to be for mere convenience; rather, the two ROM device aspect appears to be critical to ensure the authentication program cannot be bypassed.

Claim 6, by contrast, is directed to a computer system comprising "a read only memory (ROM) coupled to the CPU, wherein the ROM further comprises: a redundant portion; and a non-redundant portion; wherein the redundant portion of the ROM stores a first set of BIOS programs and a second set of BIOS programs; and wherein the non-redundant portion of the ROM stores a first set of operating system drivers..." Appellants respectfully submit that Alcorn taken with allegedly admitted prior art does not teach or fairly suggest the limitations of representative

³⁶ Alcorn Col. 7, lines 17-31 (emphasis added).

³⁷ Alcorn Col. 8, lines 38-49 (emphasis added).

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claim 6. Although Alcorn discusses a "ROM 14," it appears of critical importance in Alcorn that two separate ROM devices are used to ensure the authentication program cannot be bypassed.³⁸ In discussing suggestion or motivation to modify references, the Manual of Patent Examining Procedures (MPEP) admonishes that "The prior art must suggest the desirability of the claimed invention."³⁹ Not only does Alcorn not teach putting the various programs on a single ROM device, but teaches away from such a configuration. Thus, the rejection based on Alcorn fails to make a *prima facie* case of obviousness. For this reason alone the rejection of representative claim 6 should be overturned.

The MPEP further admonishes that "the proposed modification cannot render the prior art unsatisfactory for its intended purpose."⁴⁰ The modification proposed by the Office action of May 17, 2005 of having all the various programs of interest of Alcorn on redundant and non-redundant portions of a single ROM device would render Alcorn unsatisfactory for its intended purposes. That is, as Appellants understand Alcorn, having the executive/loader program on two separate ROM devices ensures that the authentication program cannot be bypassed. Here again, the rejection based on Alcorn fails to make a *prima facie* case of obviousness. For this additional reason the rejection of representative claim 6 should be overturned.

The MPEP yet still further admonishes that "the proposed modification cannot change the principle of operation of a reference."⁴¹ To the extent Alcorn could still function with the modification proposed of combining the various programs onto a single ROM device, the principle of operation, in particular the principle of ensuring that the authentication program cannot be bypassed, would have to take place in some other undisclosed fashion, thus clearly changing the principle of operation. Here again, the rejection based on Alcorn fails to make a

³⁸ *Id.*

³⁹ MPEP 2143.01, 8th edition Rev. 2, May 2004, p. 2100-129.

⁴⁰ *Id.* at 2100-131.

⁴¹ *Id.* at 2100-132.

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prima facie case of obviousness. For this additional reason, the rejection of representative claim 6 should be overturned.

Claim 6 further recites, "wherein at least one operating system driver of the first set of operating system drivers is read from the ROM during installation of an operating system for the computer system." With regard to delineating ROM, the specification clearly states:

Throughout the specification **and claims**, the term read only memory (ROM) refers to integrated circuit memory devices. **If other types of read only memory devices are the focus of the discussion, those will be referred to directly, e.g., compact disk ROM (CDROM) and the like.**⁴²

In rejecting representative claim 6, the Office action dated May 17, 2005 attempts to rely on Appellants' Specification paragraph [0005] for a teaching of loading from a ROM device;⁴³ however, the cited paragraph discusses finding an appropriate driver on the internet or CD ROM, and then placing the driver on a floppy disk drive.⁴⁴ Based on Appellants' being their own lexicographers, and the specification in general, it is clear that Appellants did not teach or suggest in their Background section "wherein at least one operating system driver of the first set of operating system drivers is read from the ROM during installation of an operating system for the computer system." For this additional reason, the rejection of representative claim 6 should be overturned.

Further still, claim 6 recites, "redundant portion; ... wherein the redundant portion of the ROM stores a first set of BIOS programs and a second set of BIOS programs..." The Office action of May 17, 2005 attempts to rely on Alcorn's ROM 29 as the redundant portion, but admits that Alcorn does not teach storing a redundant copy of the BIOS.⁴⁵ The Office action attempts to cover this glaring deficiency by saying one of ordinary skill would know to provide the redundant copy in the ROM 29. Appellants respectfully traverse this assertion. To the

⁴² ([0020], lines 1-3) (emphasis added).

⁴³ Office action dated May 17, 2005, page 2, number section 5.

⁴⁴ ([0005], lines 7-13).

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extent one of ordinary skill might have thought to provide a redundant copy of the BIOS programs (which Appellants do not admit), Appellants respectfully submit that one of ordinary skill would have only thought to put the redundant BIOS programs in the second ROM, ROM 30, in conformance with the teaching of Alcorn.

Based on the foregoing, Appellants respectfully submit that the rejections of the claims in this first grouping be reversed, and the claims set for issue.

B. Claim 10

Claim 10 stands rejected as allegedly obvious over Alcorn and Nakagiri.

Alcorn is directed to an electronic casino gaming system with improved play capability, authentication and security.⁴⁶ As Appellants understand Alcorn, security and authentication of the programs on Alcorn's casino game are of primary concern. Nakagiri is directed to a peripheral device, such as a printer, that has multiple device drivers where at least one of those device drivers is transferred to the host computer as needed.⁴⁷

As discussed above, the MPEP admonishes that "the prior art must suggest the desirability of the claimed invention"⁴⁸ and that "the proposed modification cannot render the prior art unsatisfactory for its intended purpose."⁴⁹ Appellants respectfully submit that Alcorn does not teach or fairly suggest coupling the casino game to a peripheral device that transfers device drivers to the casino game, as this would seem to be a security risk rendering Alcorn unsatisfactory for its intended purpose. In fact, as Appellants understand Alcorn, it would seem Alcorn teaches away from such a system because of the security risk posed by an external device transferring device drivers that could bypass the security features of the casino game. Thus, the rejection based on Alcorn fails to make a *prima facie* case of obviousness.

⁴⁵ Office action dated May 17, 2005, page 3.

⁴⁶ Alcorn Title.

⁴⁷ Nakagiri Abstract; Figures 1 and 3.

⁴⁸ MPEP 2143.01, 8th edition Rev. 2, May 2004, p. 2100-129.

⁴⁹ *Id.* at 2100-131.

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Moreover, Claim 10 specifically recites, "storing in a ROM device of a computer system a basic input output system (BIOS) program; and storing in the ROM hardware drivers for a plurality of different operating systems." Appellants respectfully submit that even if Alcorn and Nakagiri are considered together (which Appellants do not admit is proper), one of ordinary skill in the art would still not be led to the limitations of claim 10. In particular, while a peripheral device such as a printer may be coupled to many different types of host computers, a ROM device with a particular BIOS is generally destined for a particular computer. Thus, Appellants respectfully submit that one of ordinary skill, even if considering Alcorn and Nakagiri, would not think to put BIOS programs for a particular machine on the same ROM device with "hardware drivers for a plurality of different operating systems."

Based on the foregoing, Appellants respectfully submit that the rejection of claim 10 be reversed, and the claim set for issue.

C. Claims 11 and 12

Claims 11 and 12 stand rejected as allegedly obvious over Alcorn and Nakagiri. Claim 11 is representative of this grouping of claims. The grouping should not be construed to mean the patentability of any of the claims may be determined in later actions (*e.g.*, actions before a court) based on the groupings. Rather, the presumption of 35 USC § 282 shall apply to each of these claims individually.

Alcorn is directed to an electronic casino gaming system with improved play capability, authentication and security.⁵⁰ In particular, Alcorn addresses a problem in that gaming commissions have previously "required that all software components in an electronic gaming system be stored in unalterable memory..."⁵¹ and that the contents of the unalterable memory be verified whenever a machine makes a payout above a certain dollar figure.⁵² The

⁵⁰ Alcorn Title.

⁵¹ Alcorn Col. 1, lines 36-38.

⁵² Alcorn Col. 1, lines 39-44; lines 63-67.

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requirement regarding storing all software in unalterable memory limited the scope of game play of prior devices.⁵³ To address these shortcomings, Alcorn appears to describe a system that allows for expanded program capacity for more sophisticated games,⁵⁴ while also allowing authentication within the casino game itself.⁵⁵ To accomplish this task, Alcorn appears to disclose a system where ROM of the casino game comprises an authentication program and a loader program broken up across multiple ROM devices.⁵⁶ Having the executive/loader program in two separate ROM devices appears to be an important aspect of the Alcorn system.⁵⁷ Nakagiri is directed to a peripheral device, such as a printer, that has multiple device drivers where at least one of those device drivers are transferred to the host computer as needed.⁵⁸

Claim 11, by contrast, is directed to a method comprising, "dividing the ROM into a redundant and non-redundant portions; storing the BIOS program in the redundant portion of the ROM; storing a second BIOS program in the redundant portion of the ROM; and storing the hardware drivers in the non-redundant portion of the ROM." Appellants respectfully submit that Alcorn and Nakagiri do not teach or fairly suggest the limitations of representative claim 11. Although Alcorn discusses a "ROM 14," it appears of critical importance in Alcorn that two separate ROM devices are used to ensure the authentication program cannot be bypassed.⁵⁹ The MPEP admonishes that "The prior art must suggest the desirability of the claimed invention."⁶⁰ Not only does Alcorn not teach putting the various programs on a single ROM device, but teaches away from such a configuration. Thus, even if the teachings of Nakagiri are precisely as the Office

⁵³ Alcorn Col. 2, lines 3-18.

⁵⁴ Alcorn Col. 5, lines 26-28.

⁵⁵ Alcorn Col. 2, lines 30-34.

⁵⁶ Alcorn Col. 7, lines 17-31.

⁵⁷ Alcorn Col. 8, lines 38-49.

⁵⁸ Nakagiri Abstract; Figures 1 and 3.

⁵⁹ *Id.*

⁶⁰ MPEP 2143.01, 8th edition Rev. 2, May 2004, p. 2100-129.

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action suggests (which the Appellants do not admit) the rejection based on Alcorn fails to make a *prima facie* case of obviousness. For this reason alone the rejection of representative claim 11 should be overturned.

The MPEP further admonishes that "the proposed modification cannot render the prior art unsatisfactory for its intended purpose."⁶¹ The modification proposed by the Office action of having all the various programs of interest of Alcorn on redundant and non-redundant portions of a single ROM device would render Alcorn unsatisfactory for its intended purposes. That is, as Appellants understand Alcorn, having the executive/loader program on two separate ROM devices ensures that the authentication program cannot be bypassed. Here again, even if the teachings of Nakagiri are precisely as the Office action suggests (which the Appellants do not admit), the rejection based on Alcorn fails to make a *prima facie* case of obviousness. For this additional reason the rejection of representative claim 11 should be overturned.

The MPEP yet still further admonishes that "the proposed modification cannot change the principle of operation of a reference."⁶² To the extent Alcorn could still function with the modification proposed of combining the various programs onto a single ROM device, the principle of operation, in particular the principle of ensuring that the authentication program cannot be bypassed, would have to take place in some other undisclosed fashion, thus clearly changing the principle of operation. Here again, even if the teachings of Nakagiri are precisely as the Office action suggests (which the Appellants do not admit), the rejection based on Alcorn fails to make a *prima facie* case of obviousness. For this additional reason, the rejection of representative claim 11 should be overturned.

Further still, claim 11 recites "dividing the ROM into a redundant and non-redundant portions; **storing the BIOS program in the redundant portion of the ROM; storing a second BIOS program in the redundant portion of the ROM...**" The Office action attempts to rely on Alcorn's ROM 29 as the

⁶¹ *Id.* at 2100-131.

⁶² *Id.* at 2100-132.

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redundant portion, but admits that Alcorn does not teach storing a redundant copy of the BIOS.⁶³ The Office action attempts to cover this glaring deficiency by saying one of ordinary skill would know to provide the redundant copy in the ROM 29. Appellants respectfully traverse this assertion. To the extent one of ordinary skill might have thought to provide a redundant copy of the BIOS programs (which Appellants do not admit), Appellants respectfully submit that one of ordinary skill would have only thought to put the redundant BIOS programs in the second ROM, ROM 30, in conformance with the teaching of Alcorn. For this additional reason, the rejection of representative claim 11 should be overturned.

Moreover, Claim 11 recites (by way of its dependency from claim 10), "storing in a ROM device of a computer system a basic input output system (BIOS) program; and storing in the ROM hardware drivers for a plurality of different operating systems." Appellants respectfully submit that even if Alcorn and Nakagiri are considered together (which Appellants do not admit is proper), one of ordinary skill in the art would still not be led to the limitations of claim 10. In particular, while a peripheral device such as a printer may be coupled to many different types of host computers, a ROM device with a particular BIOS is generally destined for a particular computer. Thus, Appellants respectfully submit that one of ordinary skill, even if considering Alcorn and Nakagiri, would not think to put BIOS programs for a particular machine on the same ROM device with "hardware drivers for a plurality of different operating systems."

Based on the foregoing, Appellants respectfully submit that the rejections of the claims in this grouping be reversed, and the claims set for issue.

D. Claims 16-20

Claims 16-20 stand rejected as obvious over allegedly admitted prior art, Alcorn and Nakagiri. Claim 18 is representative of this grouping of claims. The grouping should not be construed to mean the patentability of any of the claims may be determined in later actions (e.g., actions before a court) based on the

⁶³ Office action dated May 17, 2005, page 5.

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groupings. Rather, the presumption of 35 USC § 282 shall apply to each of these claims individually.

Alcorn is directed to an electronic casino gaming system with improved play capability, authentication and security.⁶⁴ In particular, Alcorn addresses a problem in that gaming commissions have previously "required that all software components in an electronic gaming system be stored in unalterable memory...",⁶⁵ and that the contents of the unalterable memory be verified whenever a machine makes a payout above a certain dollar figure.⁶⁶ The requirement regarding storing all software in unalterable memory limited the scope of game play of prior devices.⁶⁷ To address these shortcomings, Alcorn appears to describe a system that allows for expanded program capacity for more sophisticated games,⁶⁸ while also allowing authentication within the casino game itself.⁶⁹ To accomplish this task, Alcorn appears to disclose a system where ROM of the casino game comprises an authentication program and a loader program broken up across multiple ROM devices.⁷⁰ Having the executive/loader program in two separate ROM devices appears to be an important aspect of the Alcorn system.⁷¹ Nakagiri is directed to a peripheral device, such as a printer, that has multiple device drivers where at least one of those device drivers are transferred to the host computer as needed.⁷²

Claim 18, by contrast, is directed to a computer system comprising, "a read only memory (ROM) coupled to the microprocessor; and wherein the ROM further comprises: a redundant portion; and a non-redundant portion; wherein the

⁶⁴ Alcorn Title.

⁶⁵ Alcorn Col. 1, lines 36-38.

⁶⁶ Alcorn Col. 1, lines 39-44; lines 63-67.

⁶⁷ Alcorn Col. 2, lines 3-18.

⁶⁸ Alcorn Col. 5, lines 26-28.

⁶⁹ Alcorn Col. 2, lines 30-34.

⁷⁰ Alcorn Col. 7, lines 17-31.

⁷¹ Alcorn Col. 8, lines 38-49.

⁷² Nakagiri Abstract; Figures 1 and 3.

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redundant portion of the ROM stores a first set and a second set of BIOS programs;... ." Appellants respectfully submit that their allegedly admitted prior art, Alcorn and Nakagiri do not teach or fairly suggest the limitations of representative claim 18. Although Alcorn discusses a "ROM 14," it appears of critical importance in Alcorn that two separate ROM devices are used to ensure the authentication program cannot be bypassed.⁷³ The MPEP admonishes that "The prior art must suggest the desirability of the claimed invention."⁷⁴ Not only does Alcorn not teach putting the various programs on a single ROM device, but teaches away from such a configuration. Thus, even if the teachings of Nakagiri are precisely as the Office action suggests (which the Appellants do not admit) the rejection based on allegedly admitted prior art, Alcorn and Nakagiri fails to make a *prima facie* case of obviousness. For this reason alone the rejection of representative claim 18 should be overturned.

The MPEP further admonishes that "the proposed modification cannot render the prior art unsatisfactory for its intended purpose."⁷⁵ The modification proposed by the Office action of having all the various programs of interest of Alcorn on redundant and non-redundant portions of a single ROM device would render Alcorn unsatisfactory for its intended purposes. That is, as Appellants understand Alcorn, having the executive/loader program on two separate ROM devices ensures that the authentication program cannot be bypassed. Here again, even if the teachings of Nakagiri are precisely as the Office action suggests (which the Appellants do not admit), the rejection based on allegedly admitted prior art, Alcorn and Nakagiri fails to make a *prima facie* case of obviousness. For this additional reason the rejection of representative claim 18 should be overturned.

⁷³ *Id.*

⁷⁴ MPEP 2143.01, 8th edition Rev. 2, May 2004, p. 2100-129.

⁷⁵ *Id.* at 2100-131.

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The MPEP yet still further admonishes that "the proposed modification cannot change the principle of operation of a reference."⁷⁶ To the extent Alcorn could still function with the modification proposed of combining the various programs onto a single ROM device, the principle of operation, in particular the principle of ensuring that the authentication program cannot be bypassed, would have to take place in some other undisclosed fashion, thus clearly changing the principle of operation. Here again, even if the teaching of Nakagiri are precisely as the Office action suggests (which the Appellants do not admit), the rejection based on allegedly admitted prior art, Alcorn and Nakagiri fails to make a *prima facie* case of obviousness. For this additional reason, the rejection of representative claim 18 should be overturned.

Claim 18 further recites, "wherein at least one of the operating system drivers is read from the ROM during installation of an operating system for the computer system." With regard to delineating ROM, the specification clearly states that the term ROM used alone encompasses only integrated circuit memory devices.⁷⁷ In rejecting representative claim 6, the Office action dated May 17, 2005 attempts to rely on Appellants' Specification paragraph [0005] for a teaching of loading from a ROM device;⁷⁸ however, the cited paragraph discusses only finding an appropriate driver on the internet or CD ROM, and then placing the driver on a floppy disk drive.⁷⁹ Based on Appellants' being their own lexicographers, and the specification in general, it is clear that Appellants did not teach or suggest in their Background section "wherein at least one of the operating system drivers is read from the ROM during installation of an operating system for the computer system." For this additional reason, the rejection of representative claim 18 should be overturned.

Further still, claim 18 recites "a redundant portion; and a non-redundant portion; wherein the redundant portion of the ROM stores a first set and a

⁷⁶ *Id.* at 2100-132.

⁷⁷ ([0020], lines 1-3).

⁷⁸ Office action dated May 17, 2005, page 2, number section 5.

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second set of BIOS programs... .” The Office action attempts to rely on Alcorn's ROM 29 as the redundant portion, but admits that Alcorn does not teach storing a redundant copy of the BIOS.⁸⁰ The Office action attempts to cover this glaring deficiency by saying one of ordinary skill would know to provide the redundant copy in the ROM 29. Appellants respectfully traverse this assertion. To the extent one of ordinary skill would have thought to provide a redundant copy of the BIOS programs (which Appellants do not admit), Appellants respectfully submit that one of ordinary skill would have only thought to put the redundant BIOS programs in the second ROM, ROM 30, in conformance with the teachings of Alcorn.

Finally, Claim 18 recites (by way of its dependency from claim 10), “wherein the non-redundant portion of the ROM stores operating system drivers for a plurality of different operating systems;... .” Appellants respectfully submit that even if Alcorn and Nakagiri are considered together (which Appellants do not admit is proper), one of ordinary skill in the art would still not be led to the limitations of claim 10. In particular, while a peripheral device such as a printer may be coupled to many different types of host computers, a ROM device with a particular BIOS is generally destined for a particular type of computer. Thus, Appellants respectfully submit that one of ordinary skill, even if considering Alcorn and Nakagiri, would not think to put BIOS programs for a particular machine on the same ROM device with “operating system drivers for a plurality of different operating systems.”

Based on the foregoing, Appellants respectfully submit that the rejections of the claims in this grouping be reversed, and the claims set for issue.

⁷⁹ ([0005], lines 7-13).

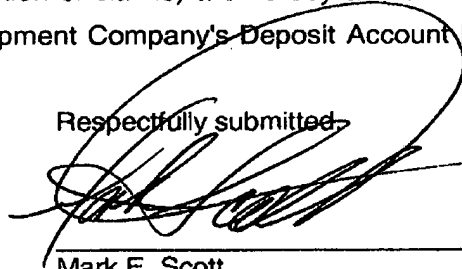
⁸⁰ Office action dated May 17, 2005, page 8.

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VIII. CONCLUSION

For the reasons stated above, Appellants respectfully submit that the Examiner erred in rejecting all pending claims. It is believed that no extensions of time or fees are required, beyond those that may otherwise be provided for in documents accompanying this paper. However, in the event that additional extensions of time are necessary to allow consideration of this paper, such extensions are hereby petitioned under 37 CFR § 1.136(a), and any fees required (including fees for net addition of claims) are hereby authorized to be charged to Hewlett-Packard Development Company's Deposit Account No. 08-2025.

Respectfully submitted,



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IX. CLAIMS APPENDIX

1. (Cancelled).
2. (Previously presented) A computer system comprising:
 - a CPU;
 - a main memory array coupled to the CPU;
 - a read only memory (ROM) coupled to the CPU, wherein the ROM further comprises:
 - a first set of BIOS programs associated with a first set of operating system drivers; and
 - a second set of BIOS programs associated with a second set of operating system drivers;
 - wherein at least one operating system driver of the first set of operating system drivers is read from the ROM during installation of an operating system for the computer system.
3. (Original) The computer system as defined in claim 2 wherein the first and second sets of BIOS programs are substantially identical.
4. (Original) The computer system as defined in claim 2 wherein the first and second sets of operating system drivers are substantially identical.
5. (Original) The computer system as defined in claim 2 wherein the ROM further comprises an electrically erasable programmable read only memory.
6. (Previously presented) A computer system comprising:
 - a CPU;
 - a main memory array coupled to the CPU;
 - a read only memory (ROM) coupled to the CPU, wherein the ROM further comprises:
 - a redundant portion; and

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a non-redundant portion;
wherein the redundant portion of the ROM stores a first set of BIOS programs and a second set of BIOS programs; and
wherein the non-redundant portion of the ROM stores a first set of operating system drivers; and
wherein at least one operating system driver of the first set of operating system drivers is read from the ROM during installation of an operating system for the computer system.

7. (Original) The computer system as defined in claim 6 wherein the first and second set of BIOS programs are substantially identical.

8. (Original) The computer system as defined in claim 6 wherein the ROM further comprises an electrically erasable programmable read only memory.

9. (Previously presented) The computer system as defined in claim 6 further comprising:

wherein the ROM further comprises an electrically erasable programmable read only memory (EEPROM); and
wherein the EEPROM stores two substantially identical copies of the BIOS programs after installation of the operating system.

10. (Previously presented) A method comprising:
storing in a ROM device of a computer system a basic input output system(BIOS) program; and
storing in the ROM hardware drivers for a plurality of different operating systems.

11. (Previously presented) The method as defined in claim 10 further comprising:

dividing the ROM into a redundant and non-redundant portions;

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storing the BIOS program in the redundant portion of the ROM;
storing a second BIOS program in the redundant portion of the ROM; and
storing the hardware drivers in the non-redundant portion of the ROM.

12. (Previously presented) The method as defined in claim 11 wherein the BIOS program and the second BIOS program are substantially the same.

13. (Previously presented) A method comprising:
storing a first copy of a basic input output system (BIOS) program in a ROM device of a computer system;
storing a first copy hardware drivers in the ROM associated with the first copy of the BIOS program;
storing a second copy of the BIOS program in the ROM; and
storing a second copy of the hardware drivers in the ROM associated with the second copy of the BIOS program.

14. (Previously presented) A method comprising:
storing a basic input output system (BIOS) program being a first BIOS program in an electrically erasable programmable read only memory (EEPROM) of a computer system;
storing hardware drivers in the EEPROM;
copying one or more hardware drivers from the EEPROM;
erasing the hardware drivers from the EEPROM after the one or more hardware drivers have been copied; and
flashing a second BIOS program to the EEPROM in place of the hardware drivers.

15. (Previously presented) The method as defined in claim 14 wherein the second BIOS program is substantially the same as the first BIOS program.

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16. (Previously presented) A method comprising:
supplying an operating system driver during the installation of an operating system by copying the operating system driver from a read only memory (ROM) device comprising a basic input output system (BIOS) and operating system drivers for a plurality of different operating systems.
17. (Previously presented) The method as defined in claim 16 further comprising supplying the operating system driver from the ROM being an electrically erasable programmable read only memory.
18. (Previously presented) A computer system comprising:
a microprocessor;
a main memory array coupled to the microprocessor;
a read only memory (ROM) coupled to the microprocessor; and
wherein the ROM further comprises:
a redundant portion; and
a non-redundant portion;
wherein the redundant portion of the ROM stores a first set and a second set of BIOS programs; and
wherein the non-redundant portion of the ROM stores operating system drivers for a plurality of different operating systems;
wherein at least one of the operating system drivers is read from the ROM during installation of an operating system for the computer system.
19. (Original) The computer system as defined in claim 18 wherein the first and second sets of BIOS programs are substantially the same.
20. (Original) The computer system as defined in claim 19 wherein the ROM further comprises an electrically erasable programmable read only memory.

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21. (Previously presented) A method comprising:
dividing an electrically erasable programmable read only memory (EEPROM) into a redundant and non-redundant portions;
storing in the redundant portion of the EEPROM a first set of basic input output system (BIOS) programs and a second set of BIOS programs; and
storing in the non-redundant portion of the EEPROM operating system drivers.
22. (Previously presented) The method as defined in claim 21 wherein the first set of BIOS programs and the second set of BIOS programs are substantially the same.

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X. EVIDENCE APPENDIX

None.

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XI. RELATED PROCEEDINGS: APPENDIX

None.